



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HELMUT REMBOLD ET AL

Application No.: 09/298,926

Group No.: 3747

Filed: April 26, 1999

Examiner: Carl S. Miller

For: FUEL SUPPLY SYSTEM OF AN INTERNAL COMBUSTION ENGINE

RECEIVED

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

MAR 17 2004
TECHNOLOGY CENTER R3700

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
BEFORE MAILING DATE OF EITHER A FINAL ACTION
OR NOTICE OF ALLOWANCE (37 C.F.R. § 1.97(c))

TIME OF TRANSMITTAL OF ACCOMPANYING
INFORMATION DISCLOSURE STATEMENT

1. The information disclosure statement transmitted herewith is being filed *after* three months of the filing date of this national application or the date of entry of the national stage as set forth in Section 1.491 in an international application or after the mailing date of the first Office action on the merits, whichever event occurred last but *before* the mailing date of either

- (1) a final action under § 1.113 or
- (2) a notice of allowance under § 1.311

whichever occurs first.

FEE

2. Accompanying this transmittal is the fee for submission of an information disclosure statement under section 1.97(c). (\$180.00)

FEE PAYMENT

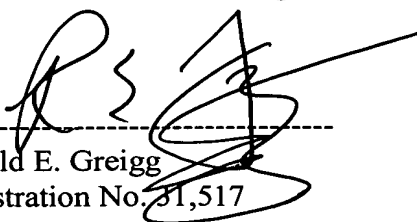
3. Applicant elects the option to pay the fee set forth in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under § 1.97(c) (\$180.00).

Fee due \$180.00

METHOD OF PAYMENT OF FEE

4. Authorization is hereby made to charge the amount of \$180.00 to Deposit Account No. 07-2100. A duplicate of this paper is attached.

Date: 12 March 2004



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/298,926 Confirmation No: 2590
Applicant : Helmut REMBOLD et al
Filed : April 26, 1999
TC/A.U. : 3747
Examiner : Carl S. MILLER

Docket No. : R.33554

Customer No. : 02119

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TECHNOLOGY CENTER R3700

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: March 12, 2004

**IDS STATEMENT UNDER 37 CFR 1.97(c) REGARDING THE
RELEVANCE OF THE CITED PRIOR ART**

Sir:

The undersigned hereby requests that the prior art cited on the attached prior art statement be placed of record in the application file.

This citation of prior art is made under 37 CFR 1.97(c), since it is being filed prior to any Final Rejection, and is being accompanied by the fee as set forth in 37 CFR 1.17(p).

The relevance of the prior art cited on the attached form 1449 is as follows:

03/15/2004 HDEHESS1 00000030 072100 10298926

04 FC:1806 180.00 DA

Serial No. 09/298,926
Dated March 12, 2004
Attached to Response to OA dated Oct. 17, 2003

DE 44 01 083 A

The device of this patent has a fuel pump in a low pressure supply leading to the high pressure pump, and with a high pressure source as the common rail for all magnetic valve controlled injection nozzles. Fuel volumes supplied in all load conditions of the engine are controllable solely by operating parameters on the low pressure side. The controlled fuel volumes are supplied to the unregulated high pressure pump (4) according to camshaft speed or a whole number of multiples thereof.

DE 195 39 885 A

A fuel supply systems with two series-connected pumps and with fuel injection valves that inject fuel directly into a combustion chamber of an engine in which a starting process takes less time because of the small feed quantity of the second fuel pump. The system includes a valve device which assures that during the starting process the first fuel pump furnishes the fuel to the fuel valves at elevated feed pressure. In many cases, this elevated feed pressure suffices to start the engine in the quickest possible time. The apparatus and the method are intended for an internal combustion engine of a vehicle.

US 5,878,718 is an equivalent from the same family of patents as DE 195 39 885 A.

Serial No. 09/298,926
Dated March 12, 2004
Attached to Response to OA dated Oct. 17, 2003

DE 196 18 932 A

The invention disclosed in this patent relates to a device and process to regulate fuel pressure in a high pressure accumulator (7) wherein volumetric flow control and pressure control are combined in order to take advantage of both systems with the result of increased dynamic performance and higher efficiency.

FR 2 742 809 A

This patent discloses a process and a device for controlling an internal combustion engine having high-pressure injection, in particular for an internal combustion engine having a common rail system. The fuel is delivered by at least one pump from a low-pressure area into a high-pressure area. A pressure sensor detects the fuel pressure prevailing in the high-pressure area. At least one first and one second final controlling element are provided for influencing the fuel pressure prevailing in the high-pressure area.

US 6,142,120 is an equivalent from the same family of patents as FR 2 742 809 A.

WO 95 13474 A

A control device for a filling-ratio adjusting pump with at least one displacement space works on the suction-throttle principle with a positive variation in volume of the displacement space or displacement spaces and is intended inter alia particularly for common-rail diesel injection systems. It allows an exact, precise and

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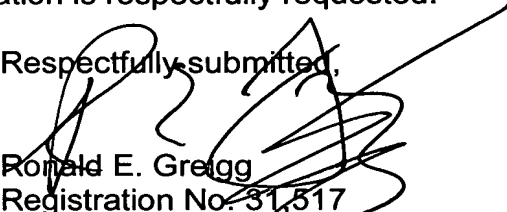
highly dynamic control of the filling-ratio adjusting pump at low outlay, without the system being impaired by undesirable cavitation. Located on the suction side of the pump is at least one throttling 2/2-way valve (21, 21a, 21b; 134; 51, 52, 53, 54; 81; 103) actuated by pressure difference. Either such a 2/2-way valve can be used for a group of displacement spaces or for the entire pump or a respective valve of this type can be inserted in front of each individual displacement space. The pressure-difference control of the or each 2/2-way valve takes place via an adjusting device (27; 150) which is arranged on the inflow side of the 2/2-way valve and which is designed either as a throttling valve or as a flow-regulating valve.

US 5,701,873 is an equivalent from the same family of patents as WO 95 13474 A.

A copy of this patent is enclosed with this prior art statement.

Further examination of this application is respectfully requested.

Respectfully submitted,


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Date: March 12, 2004

A:\2004-03-15, IDS under 1.97(c), filed after 1st OA & before FR, and relevance of art.wpd